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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,970	11/18/2003	Alex Hornig	HORN3171/EM	4591
23364 7590 07/18/2007 BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314				
			EXAMINER WIEHE, NATHANIEL EDWARD	
			ART UNIT 3745	PAPER NUMBER
			MAIL DATE 07/18/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/714,970

Applicant(s)

HORNG ET AL.

Examiner

Nathan Wiehe

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 and 14-20 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7 and 9-13 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1 June 2007 has been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Lemont et al. (5,896,917), hereinafter "Lemont". Lemont discloses a heat dissipating fan including a fan-supporting cover plate (74) having an air inlet and a fan supporting base (44) connected to the cover plate by a plurality of ribs. An impeller is mounted to the underside of the base and includes a plurality of impeller blades. An air guiding member includes sidewalls defines an air passage way between the first and second ends of the air guiding member and is generally hollow. Further, the air guiding

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member provides a section, area (42) and the space between ribs (36), beyond the fan blades that is unobstructed and allows the air to be expanded. The stacked relation of the cover plate and the air guiding member provides a plurality of auxiliary side inlets (58).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4,6 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. (7,063,504), hereinafter "Huang", in view of Hong (5,522,700). Huang discloses a fan cover plate (206) including an air inlet and a base held by a plurality of ribs and an impeller including a plurality of impeller blades (203) (See Fig. 4). Huang also discloses an air guiding member (201) having an annular side wall that defines an air passageway comprising a single hollow member and stackingly connected to the cover plate. The air guiding member (201) includes an expanding air outlet (See Fig. 2B). The blades (203) of the impeller extend partially into the air guiding member. Additionally the stacked relationship of the cover plate and the air guiding member provide for a plurality of auxiliary side inlets. The cover plate and air guiding member include through-holes and post respectively to form an engaging structure. Further the cover plate or the air guiding member may include a plurality of post (206d',206g, respectively) covering the auxiliary side inlets and capable of

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preventing entrance of alien objects. Huang does not disclose the use of the cover plate base to support the fan. However, Hong discloses an axial fan including a cover plate (1) with an axial inlet and base (11) used to support the fan impeller (2) as opposed to mounting the fan on a plate extending underneath the unit. Hong's arrangement provides for a fan having a compact design and reduced overall volume. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the fan of Huang by utilizing the cover plate to support the fan and eliminating the underneath support as taught by Hong for the purpose of providing a more compact fan.

In regard to claims 3 and 4, the modified invention of Huang does not disclose the use of screws with the engagement structure. However, it is well known in the art of axial fans to provide screws to more securely fix casing elements together. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the fan of Huang by including screws in the engagement structure in order to securely fasten the two elements together.

Claim 7 is rejected under 35 U.S.C. 103(a) being unpatentable over Huang et al. (7,063,504), hereinafter "Huang", in view of Hong (5,522,700), as applied to claim 1 above and further in view of Chen (6,524,067). The modified invention of Huang disclose the invention substantially as claimed except for the use of a air outlet having a passageway that is smaller than the air inlet side. Chen discloses an axial fan including a narrowing air passageway (213) providing a concentrated flow of air to increase heat dissipation of a heat-generating device (Chen column 2, lines 29-33). Therefore, It

would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the invention of Huang by including a narrowing outlet as taught by Chen for the purpose of proving a concentrated airflow and thus increasing the heat dissipated by the fan.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang et al. (7,063,504), hereinafter "Huang", in view of Hong (5,522,700), as applied to claim 11 above and further in view of Hsieh (2002/0168277). The modified invention of Huang discloses the invention substantially as claimed except for the use of ribs in the form of stationary blades. Hsieh discloses an axial fan including ribs (20), in the form of angled stationary blades, that connect the fan supporting base (13) to the air guiding member (10). The form of the ribs, i.e. stationary blades, increases the efficiency of the fan by properly directing the airflow. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the fan of Huang by utilizing ribs in the form of angled stationary blades as taught by Hsieh for the purpose of increasing the fan efficiency.

Allowable Subject Matter

Claims 8 and 14-20 are allowed.

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

In regard to claim 5, it is not known in the art of heat dissipating fans to provide an impeller mounted to the underside of the base of a cover plate and an air guiding member having a passageway that is unobstructed from the fan supporting base to the outlet.

In regard to claim 8, the use of a heat dissipating fan including an air passageway that extending at an angle with respect to the airflow direction that is misaligned with the longitudinal direction of the air guiding member is not known in the art of heat dissipating fan nor would it have been obvious to one of ordinary skill in the art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Wiehe whose telephone number is (571)272-8648. The examiner can normally be reached on Mon.-Thur. and alternate Fri., 7am-4:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571)272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Nathan Wiehe
Examiner
Art Unit 3745



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7/16/07